

REMARKS

Claims 1-13 are pending herein. Claim 13 is a new claim. Support for new Claim 13 is found in Example 4 of the subject specification and throughout the specification.

While the Examiner has indicated that Claims 1-12 are pending and have been rejected on the Office Action Summary sheet sent with the Office Action, the examiner has only specifically recited Claims 1-9 as being rejected over the cited prior art in the detailed action, see in this regard page 2 of the Office Action. As such, the Examiner is respectfully requested in the next Office Action to indicate with specificity whether Claims 9-12 were also intended to have been rejected over the cited prior art (or any other non-cited prior art) or whether Claims 9-12 were intended to have been allowed; and due to the confusion in the record, and to allow the Applicants' the ability to respond to all of the Examiner's rejections, it is respectfully requested that the next Office Action be made non-final.

Claims 1-9 have been rejected over 35 U.S.C. § 103 (a) as being unpatentable over Combey et al. U.S. Patent No. 3,976,616 (Combey et al.). This rejection is respectfully traversed.

The Examiner has correctly acknowledged that Combey et al. discloses bisphosphate plasticizers but has failed to appreciate that the claimed neopentyl glycol bis(diphenylphosphate) composition is not at all disclosed or suggested in Combey et al. There are no bis phosphates disclosed or suggested in Combey et al. that contain a neopentyl glycol bridging moiety as is found in Applicant's claims. On the contrary, Combey et al discloses only one neopentyl moiety that corresponds to R² in formula I of Combey et al. but fails to disclose any alkyl glycols that correspond to R². One skilled in the art would readily appreciate that alkyl glycol moieties would have dramatically different properties in a molecule as compared to simply alkyl moieties. Further, Applicants' have specifically demonstrated in their examples that the recited neopentyl glycol bis(diphenylphosphate) composition is vastly superior in its properties to isodecyl diphenyl phosphate; see in this regard pages 3-5 of the subject specification, specifically Example 2. When Example 2 of the present invention, which employs neopentyl glycol bis(diphenylphosphate) is compared to Example 1 which employs isodecyl diphenyl phosphate (the control) some very unexpected improvements result, such as a dramatic decrease in the Peak Heat Release Rate, a significantly improved time to ignition, a dramatically improved Fire Performance Index,

and a much improved Smoke parameter. Nowhere in Combey et al. is there any disclosure or suggestion of such unexpected improvements with the use of neopentyl glycol bis(diphenylphosphate).

In fact, it is respectfully indicated to the Examiner that the neopentyl moiety indicated as possible for R^2 of formula I of Combey et al. is only one out of the 22 species listed in Combey et al. Further, with 16 listed species of R , R^1 , R^3 and R^4 groups the possible combinations of the R , R^1 , R^3 and R^4 groups, which can be the same or different are 1820, only, one of which is where each of R , R^1 , R^3 and R^4 groups are phenyl. Therefore, the probability of one skilled in the art picking neopentyl as the R^2 group and each of the R , R^1 , R^3 and R^4 groups as phenyl would be one out of thousands, and even if one skilled in the art did make such a combination, they still would not arrive at the presently claimed invention in that nowhere in Combey et al. is there any disclosure of an neopentyl glycol group as the moiety R^2 . Therefore, the Examiner's assertion that the only difference between the composition of Combey et al. and the claimed composition is that Applicants' are claiming specific amounts of phosphate in the composition is without basis in fact.

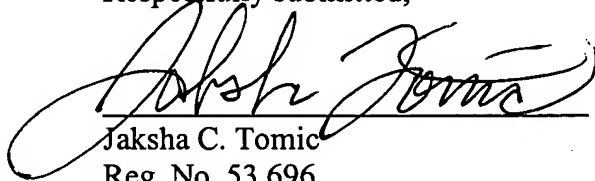
Further, Applicants' contend that Claims 5-6 and 9-13 are even further patentable over the cited prior art of record. Nowhere in Combey et al. is there any disclosure or suggestion of the use of zinc borate or ammonium octamolybdate. Applicants' have described in detail the surprising and unexpected effects of using such additional components in their description at pages 3-6 and the examples therein. Specifically the Examiner's attention is invited to the table on page 4, where improvements in several properties are described with the use of neopentyl glycol bis(diphenylphosphate) in Example 2 as compared to the control of Example 1, and even further unexpected improvements are shown in Examples 3 and 4, where zinc borate and/or ammonium octamolybdate are used in combination with the neopentyl glycol bis(diphenylphosphate) composition of the invention. Still further, Claim 13 is still even further patentable over Combey et al. in that there is no disclosure or suggestion of using both zinc borate and ammonium octamolybdate in combination with the neopentyl glycol bis(diphenylphosphate) composition of the invention. As stated above, Example 4 clearly exemplifies the unexpected improvement in various properties with the use of both zinc borate and ammonium octamolybdate in combination with the neopentyl glycol bis(diphenylphosphate) composition of the invention. Example 6

of the invention further exemplifies the dramatic improvement in smoke properties when both zinc borate and ammonium octamolybdate are used in combination with the neopentyl glycol bis(diphenylphosphate) composition of the invention. The above noted examples are merely exemplary of the unexpected improvements and the Examiner's attention is invited to the additional data found in the tables on pages 4 and 6 of the specification.

In view thereof, it is respectfully submitted that the withdrawal of the rejection of Claims 1-9 for obviousness is believed to be in order and the same is respectfully requested.

Finally, in view of all of the above, it is respectfully submitted that this application is in condition for allowance and such favorable action is courteously urged.

Respectfully submitted,



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